



THE STATE  
of **ALASKA**  
GOVERNOR SEAN PARNELL

Department of Environmental  
Conservation

Division of Spill Prevention and Response  
Contaminated Sites Program

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August 5, 2014

Dr. Dan Petersen  
National Risk Management Research Laboratory;  
Environmental Protection Agency  
26 West Martin Luther King Drive, A110  
Cincinnati, OH 45268

Dear Dr. Petersen:

The Alaska Department of Environmental Conservation (DEC), Division of Spill Prevention and Response (the Division) has recently contracted the services of TERA, Toxicology Excellence for Risk Assessment, to conduct an independent peer review of the chronic, oral reference doses (RfDs) for sulfolane. I am writing to you to inform you of this review and to invite your participation.

Sulfolane has been found in the groundwater in North Pole, Alaska, down gradient of a petroleum refinery in which it was used. As of 2014, approximately 285 properties with drinking water wells have been impacted and are currently receiving alternate water.

In April 2014, the DEC Commissioner asked the Division to review and re-evaluate the process through which a groundwater cleanup level was selected. As a result, the Division reached out to TERA to conduct an independent, expert peer review of the reference doses for sulfolane. The peer reviewers will conduct an in-depth assessment of the assumptions, calculations, alternate interpretations, methodology, and conclusions of the various RfDs.

The Division submitted the following documents to TERA for review by the expert panel:

1. Agency for Toxic Substances and Disease Registry (ATSDR). 2011. "Health Consultation: Sulfolane." May 2.
2. ARCADIS U.S., Inc. (ARCADIS). 2014. "Supplement to the Revised Draft Final Human Health Risk Assessment, Flint Hills North Pole Refinery, North Pole, Alaska." Report to Flint Hills Resources Alaska, LLC. May 30.
3. Canadian Council of Ministers of the Environment (CCME). 2006. "Canadian Environmental Quality Guidelines for Sulfolane: Water and Soil (Scientific Supporting Document)." PN 1368.
4. Haney, J. [Texas Commission on Environmental Quality (TCEQ)]. 2011. Sulfolane (CASRN 126-33-0) [re: Update of March 9, 2011 toxicity factor documentation with a slightly revised benchmark dose (BMD)]. September 6.
5. Health Canada. 2014. "Drinking Water Guidance Value for Sulfolane." March 17.
6. Magee, B. [ARCADIS U.S., Inc.]. 2012. Memorandum to Flint Hills Resources Alaska re: Assessment of dose response information for sulfolane. May 21.
7. Thompson, CM; Gaylor, DW; Tachovsky, JA; Perry, C; Carakostas, MC; Haws, LC. 2013. "Development of a chronic noncancer oral reference dose and drinking water screening level for sulfolane using benchmark dose modeling." J. Appl. Toxicol. 33(12):1395-1406.

8. US EPA. 2012. "Provisional Peer Reviewed Toxicity Values for Sulfolane (CAS No. 126-33-0)." National Center for Environmental Assessment (NCEA), Superfund Health Risk Technical Support Center, January 30.

The independent panel will discuss the RfDs at an in-person meeting on September 16-17, 2014 in Fairbanks Alaska. The meeting will follow TERA's standard peer review process in that the discussion will be limited to panel members. However, authors or their representatives are invited to attend the meeting as the panel members may seek information or clarification from the authors to better understand the basis for each of the RfDs. In turn, the RfD authors will be provided with some limited opportunities to ask the panel clarifying questions, as needed, to confirm understanding. Because you are identified as one an author or contact person for one of the RfDs being reviewed, we would like to extend an invitation to you.

As mentioned, the meeting is scheduled to take place on September 16-17, 2014 in the Wood Center located at the University of Alaska - Fairbanks campus. If you are interested in attending this meeting, either in person or by teleconference, please contact Jacqueline Patterson of TERA ([patterson@tera.org](mailto:patterson@tera.org)) by August 20. TERA will schedule a pre-meeting teleconference with authors to explain the meeting process and ground rules that will be used. We request that all those who plan to attend the peer review meeting, attend this teleconference. Please note that invitees are responsible for their travel arrangements.

The expert panel will be utilizing the documents listed above, along with key references/studies. If you have any additional information related to your RfD that you think may be helpful to the reviewers please share these with Jacqueline Patterson.

Your participation in this process is important, please consider this invitation and RSVP by August 20, 2014. If you have any additional questions, please contact me at [tamara.cardona@alaska.gov](mailto:tamara.cardona@alaska.gov) or (907) 451-2192.

Sincerely,



Tamara Cardona, PhD  
Environmental Program Specialist